

## OFF-LINE PRINT STATION

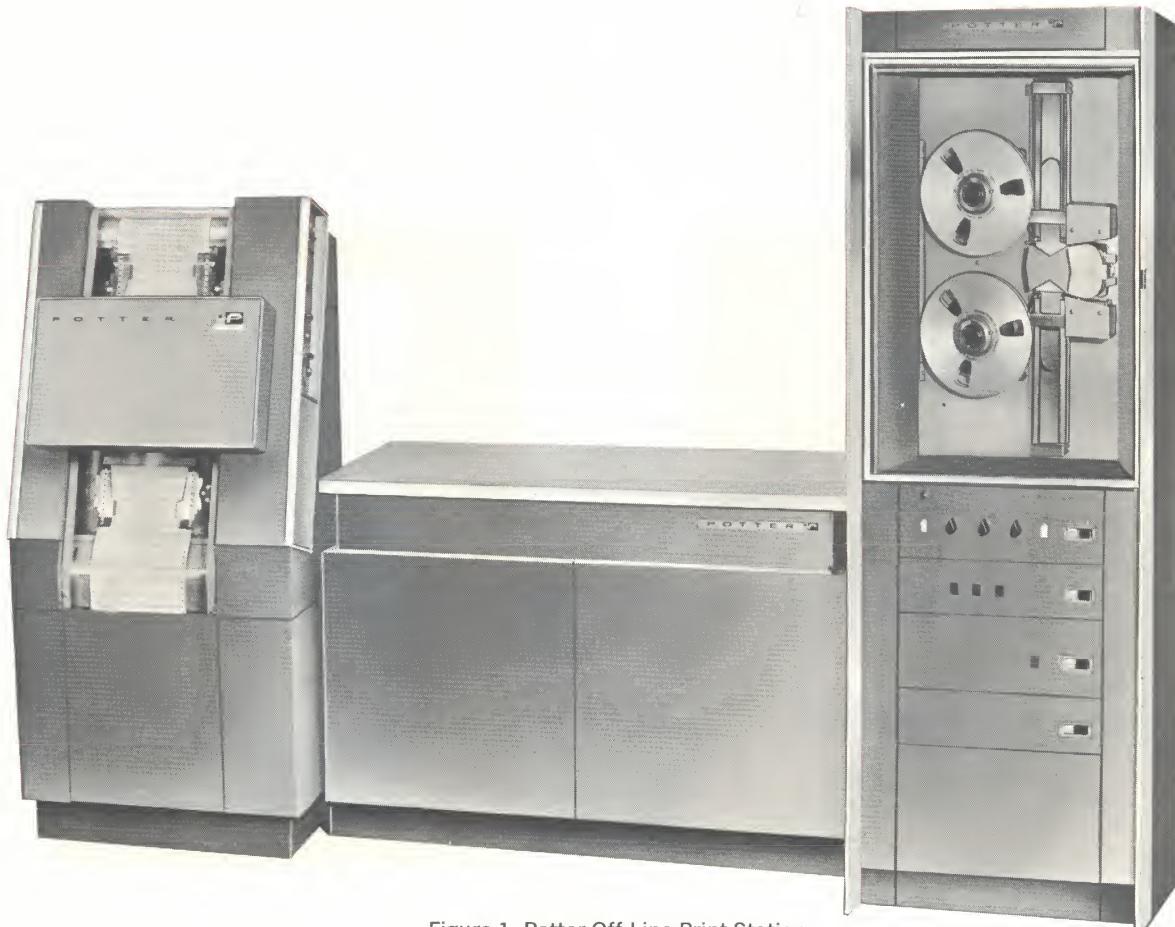


Figure 1. Potter Off-Line Print Station

## INTRODUCTION

The Potter Off-Line Printer System is designed to relieve computers of the routine task of producing hard copy. By using the HSP-3501 Printer System, substantial computer time can be freed for more demanding operations. The printer system can be supplied to be compatible with systems of all major manufacturers.

## SYSTEM DESCRIPTION

The basic HSP-3501 Off-Line Printer System includes a standard Potter MT-24, MT-36 or MT-75 Digital Magnetic Tape Transport; a solid-state MA-315 Playback Amplifier System; a high-speed, 1000

line-per-minute printer; and a System Control Unit (Figure 2). Equipment manual controls are provided for independent checking of the transport and printer.

In the compatible system for IBM 727, 729 or 7330 series tape units, the Potter digital magnetic tape transports are capable of reading data recorded at 200, 556 or 800 characters per inch. When reading data, the signals are amplified, compensated, and converted to digital levels in the MA315 amplifier. The amplifier output is presented character-at-a-time to the Control Unit where the necessary decoding and processing of the data is accomplished before transmittal to the high-speed printer.

**TAPE FORMAT**

Data for the Off-Line Printer System is in a fixed block format, one block per record. Each record on the magnetic tape contains the data for one *line* to be printed. Each character in the data portion is appropriately framed within the *record* with respect to the print column position (Figure 3).

In addition, the record contains the control information in the record identification word as shown in Figure 3. The record *pattern* character is used by the programmer to subdivide the records on magnetic tape into groups. The System Control Unit is designed so that one of the *pattern* characters is used to select specific records to be printed for a single pass of the tape. The record-*type* character controls the subdivision of records within a pattern. The *vertical format-control* character is for selecting one of the eight channels which controls the vertical paper format.

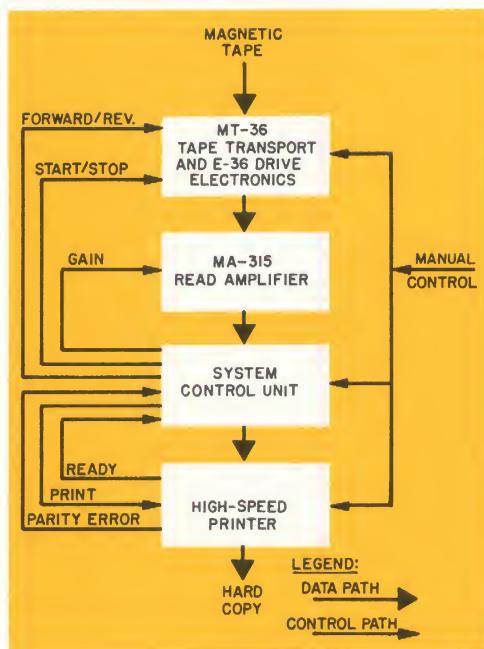


Figure 2. Off-Line Printer System Block Diagram

**SYSTEM CONTROL UNIT**

The System Control Unit performs four functions:

- decodes and interprets a record-identification word which precedes each record
- provides signals for the Start/Stop and Forward/Reverse controls of the tape transport
- checks lateral and longitudinal parity
- controls the gain of the playback amplifiers when a parity error is detected

Upon detecting a parity error, the block is reread up to seven times at increasing gain levels to insure a high probability that the data recorded is recovered without error.

The system control panel is provided for initial setup, Start/Stop and reset control of the Read/Print operation, and display of fault conditions. Once the print station is manually started, the System Control Unit provides automatic operation.

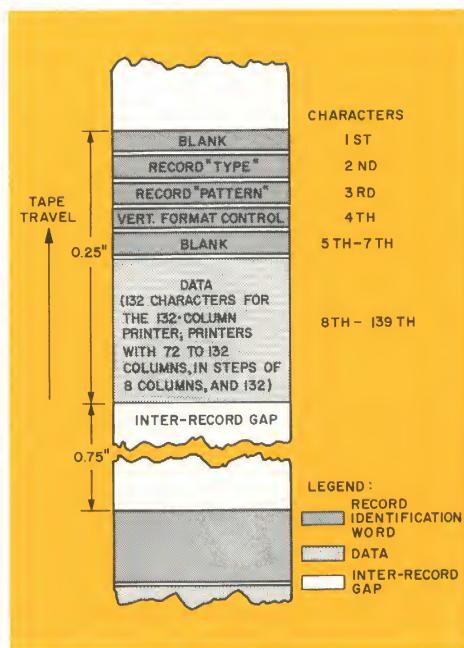


Figure 3. Typical Block Format for Tape Recorded at 556 bpi with 132 Characters per Record

**SPECIFICATIONS****Tape Transport**

**Tape Format** . . . . . Standard, IBM-compatible: 200, 556, 800 bpi. Other formats optional

**Tape Speeds** . . . . . MT-24: 24 ips  
MT-36: 36 ips  
MT-75: 75 ips

**Printer**

**Printing Speed** . . . . . 1000 lines per minute  
**Slewing Speed** . . . . . 25 ips standard; 75 ips optional  
**Number of Characters** . . . . . 64 characters

**Number of Columns** . . . . . 132 columns standard; special arrangements available with up to 132 active columns in 160-column format in increments of eight columns

**Number of Copies** . . . . . Up to six copies interleaved, card stock, or multilith master

**Paper Width** . . . . . 4 3/16 inches to 17 25/32 inches

**Horizontal Character Pitch**

10 characters per inch

**Vertical Character Pitch**

6 lines per inch standard; 8 lines per inch optional



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